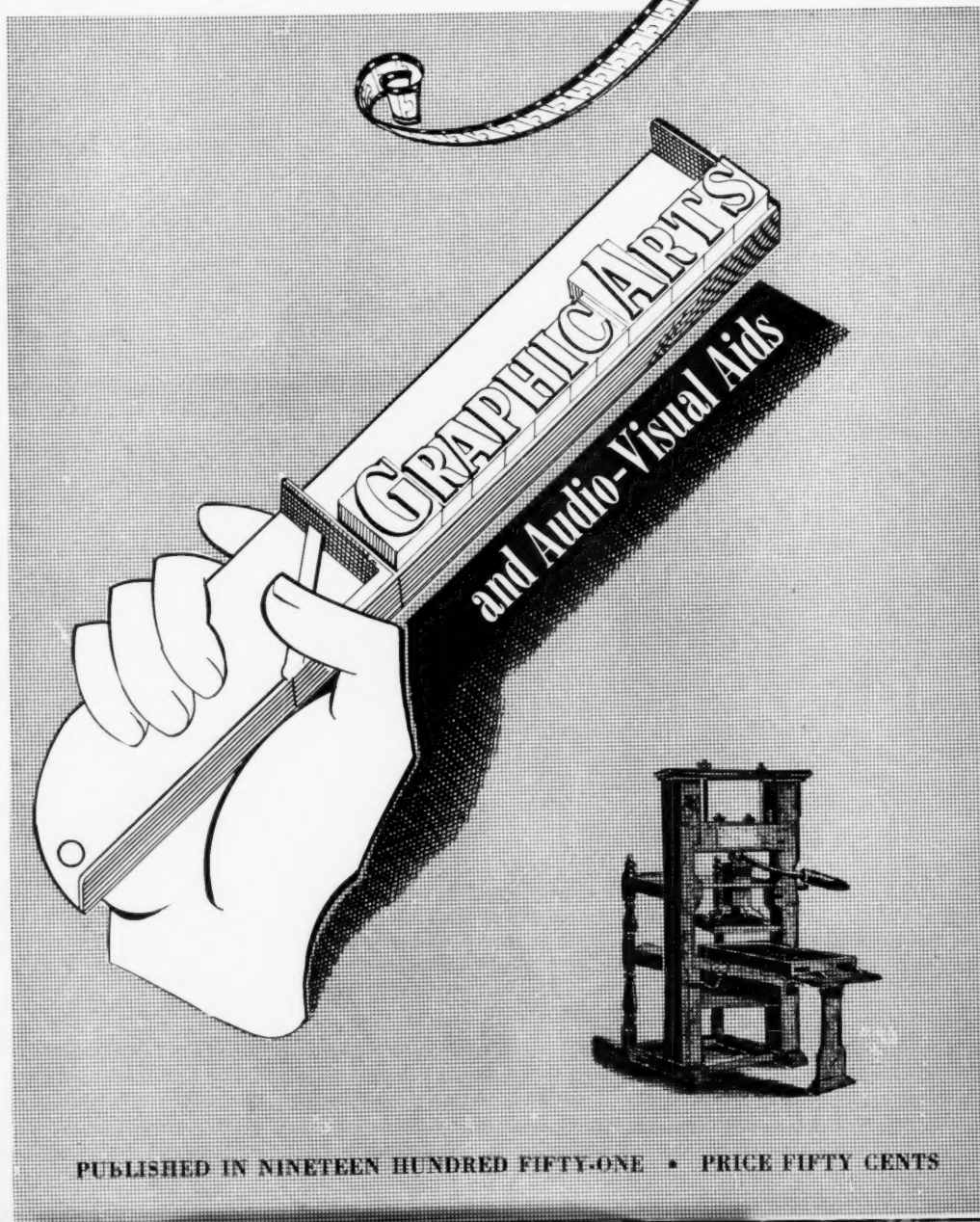


See & Hear

national audio-visual education journal

this is issue seven of volume six of the



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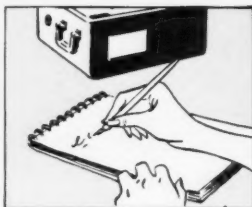


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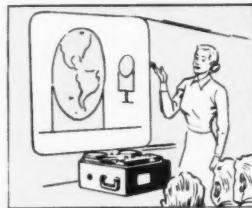
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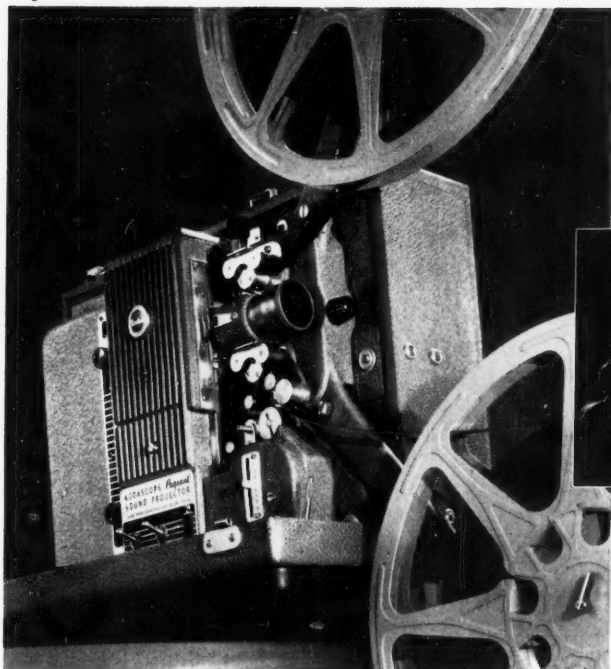
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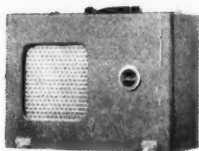
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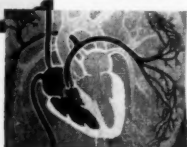
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See & Hear Magazine

"The National Audio-Visual Journal"

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Cover Note: practical printing instructors, please note,
the stick is held in the right hand for symbolic representation only.

See & Hear • The National Audio-Visual Journal

Office of Publication • 150 East Superior Street • Chicago

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SEE & HEAR

Camera

EFLA Names Miller and Schuler Chicago Conference Co-Chairmen

♦ Co-chairmen named for the Chicago Conference of the Educational Film Library Association July 26 through 28 are Clyde Miller of the Gary (Indiana) Public Schools and Charles Schuler of the University of Wisconsin.

The Conference, at the Hotel Sherman, will precede the National Audio-Visual Association's trade show and convention. Three evening screening sessions have been arranged, the one on the opening night to be followed by the annual reception of the board of directors. New members of the directorate and new officers will be announced at the meeting. Edward T. Schofield of the Newark (New Jersey) Public Schools is the incumbent president.

A-V in College Education Courses Discussed at Stephens Gathering

♦ Delegates from 29 colleges and universities and area members of the national advisory board concentrated on a-v materials in general education courses at the Third National Conference at Stephens College, Columbia, Mo., April 18 to 20.

Dr. Marvin Knudson, president of the Pueblo Junior College, introduced the topic in his address at the opening session. The role of a-v materials in general education was discussed by Dr. Edgar Dale of Ohio University, member of the national board.

Southern Illinois University's First A-V Conference Draws 100 Educators

♦ More than 100 city and county school superintendents, a-v directors and classroom teachers participated in the first Conference of the Audio-Visual Aids Service of Southern Illinois University, Carbondale, April 4. Gordon K. Butts reports the Conference

is to be an annual event. Donald A. Ingli is supervisor of the Service.

Mary E. Entsminger of University School led a demonstration of a-v in mathematics; Evelyn D. Rieke, in social problems. A panel discussion included Floyd E. Brooker, chief of visual aids to education, who also gave the luncheon address; S. E. Alkire, Charles D. Neal, Herschel Newcomb, Clyde V. Winkler, and Ingli and Butts.

Conference on Radio in Education

♦ The annual Conference on Radio in Education, to be held August 2 and 3 on the Indiana University campus, will be a workshop and clinic on planning, writing and producing educational programs. George C. Johnson will be in charge.

New Audio-Visual Center at A & M

♦ Oklahoma A & M College, which has opened a new Audio-Visual Center on the campus, will have an a-v conference June 7 and 8, with one session for demonstration of materials and the other on evaluation of classroom films.

ALA's Pre-Conference Workshop Will Open on July 7th in Chicago

♦ A showing of *Mount Vernon in Virginia* and *Lincoln Speaks at Gettysburg* will open the A-V Pre-Conference Workshop of the American Library Association July 7 and 8 at the Palmer House in Chicago. The screening will be followed by the presentation of an exhibit from the Chicago Historical Society and an American Heritage Film List prepared by a committee under the chairmanship of Mrs. Grace Stevenson of the Seattle Public Library.

The afternoon program will demonstrate children's materials. Film Readers, correlating readers and films, will be presented by Mrs. Roberta Forsyth of Chicago's Bass Elementary School, followed by a story hour with recordings, by Spencer Shaw of the Brooklyn Public Library. Art films will be shown after the joint banquet.

The second day program includes Discussion strips, a demonstration based on *Anna and the King of Siam*, by President Eric Haight of Films, Inc.; a book talk and film program on *The Quiet One* by Miss Mary Dillard, Cleveland Public Library; and a screening of new films, Chicago Public Library, with Miss J. Margaret Carter of the Canadian National Film Board presiding.

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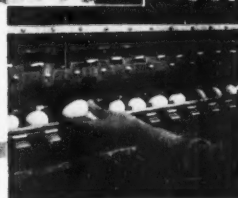
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THE GRAPHIC ARTS

The Ultimate Tool in Communications Is the Film

PRINTING through the centuries has been man's servant in broadening his world of knowledge since "the first impress . . . brought the Divine Word to countless thousands." Entering into its technology are many of the arts and sciences and here the school pupil may first encounter the enriching experience of a manual task that brings into full play natural creative abilities.

The history of printing has been not unlike traversing the galleries of time itself, each one opening through the years into greater advances in technical knowledge, yet always remaining constant to fundamentals of balance and design. Its history, too, is of great figures since Gutenberg . . . artisans, craftsmen, inventors, and scientists. Interwoven is the printed word through-the-media of journalism . . . the books, newspapers, and periodicals which educate and inform.

Printing Stimulates "Learning By Doing"

The school print shop, as "a vitalizing factor in education," is by no means limited to those who intend to enter the trade. It is far more important as an instrument of general education, inter-related to creative English, the arts, business, government, and cultural background. As Professor Frank Luther Scott of Iowa says, "I know of no means by which a boy can learn spelling, punctuation, and English usage more definitely and practically."

The "ultimate" tool of all communication, the film has a vastly important role to play in linking the ideals and objectives of printing to the understanding of those who study it, *on whatever level*. Enough materials already exist in the form of motion pictures and filmstrips, both sound and silent, to implement the creative printing curriculum as well as classes in journalism, photography, and related arts. Many more can be used with great benefit to the schools and the printing industry if prospective sponsors fully realized the benefits as well as the urgent need.

Films a Means of Inspiration and Craftsmanship

Films shown to both elementary and high school class groups can bring the full history of the craft into play, can present the elements of design and color, can create a deep desire to pursue any one of the numerous avenues of future occupation which lead off the basic program itself.

In the most casual review of this opportunity we see *boundless possibilities for practical use* of an audio-visual program on printing arts and crafts subjects for "in-

service" inspirational and training use within *the thousands of printing plants* throughout the country. A brief visual program shown once or twice a week would pay immense dividends in improved attitudes toward work and better integration of personnel. An editorial develops this thesis elsewhere in the pages of this special report. •

Printing Progress in the Schools

CLASSES IN GRAPHIC ARTS in Junior High and High Schools are sometimes considered primarily as the foundation of a basic knowledge of printing leading to a career in the printing trade. While this may sometimes be the case, a great majority (80 to 90%) of graphic arts students never make printing their profession.

Broader Viewpoint Increases Print Classes

Why then, are printing classes becoming more and more popular while new facilities for teaching printing have increased by 3 or 4 times over the number of school print shops before the war? The answer is that it is now recognized that the main purpose of non-vocational graphic arts courses is not to produce printers but to familiarize students with the basic processes in which written words become printed pages, to tie in academic work with manual craftsmanship and to impress students with the importance of printing in modern civilization.

An indication of this attitude is the requirement in most schools in the past few years that industrial arts teachers be *teachers* rather than just craftsmen. Schools are recognizing that manual skill is secondary to the integration of these skills in all academic and industrial subjects that make up a complete education.

Highest Wages Paid of Any Industry

This is not to say that students' interest in printing as a trade should be discouraged. Since World War II there has been a steady increase in employment in the printing industry and the outlook for career opportunities in the future is very bright. Trained printers are more in demand than ever before, and it should be pointed out that graphic arts as a profession is by no means limited to men. Figures of the Bureau of Labor Statistics show that in 1950 26% of all employees in the printing industry were women. The printing industry actually pays higher average weekly salaries than any other manufacturing industry in the country. •

American Type Founders Provides Graphics and Films for All Schools

★ AMERICAN TYPE FOUNDERS, INC., the leading manufacturer of printing equipment, has been supplying schools with teaching aids and explanatory booklets about graphic arts for some 25 years. The company maintains an educational department staffed by men not only expert in the printing field but with a thorough background as teachers in the schools. The department is always ready to help schools on any problems concerning the establishment or operation of graphic arts courses.

ATF offers, on free loan, one motion picture and one filmstrip on printing. The movie, *Type Speaks*, is 30 min., color, shows how type is made and demonstrates the socioeconomic impact of printing on civilization. The filmstrip, *Five Centuries of Type Founding*, with accompanying script, depicts the historical development of type. It is rather technical and is not particularly recommended for high schools.

In addition, the company sells (for \$3 per set) 24 11" by 14" wall charts on the graphic arts, and provides such brochures and booklets (free) as *Graphic Arts*, *The Foundation of a Liberal Education*, an excellent pamphlet, *Career Opportunities in the Printing Industry*, model plans for school graphic arts departments, *Caring By Printing*, on occupational therapy, and bibliographies of books and films on the graphic arts, all available from ATF, Inc., 200 Elmora Avenue, Elizabeth, New Jersey.

Mergenthaler Linotype's Long Range Educational Policy Includes Pictures

★ MERGENTHALER LINOTYPE COMPANY supplies schools with about 500 packages of literature or film prints on loan each month. This is a part of a long range policy that has been in operation for almost 35 years. The company feels a responsibility as a leading manufacturer of printing equipment to contribute as much as possible in furthering the education of the thousands of new graphic arts students and apprentice printers who meet a linotype for the first time each month.

Mergenthaler offers one 16mm film, *Model 31 Linotype*, which describes the machine, itself, and a stripfilm, *Type Character*, (with script) based on the life and accomplishments of W. A. Dwiggins, noted type designer. In addition, company agents have sets of slides illustrating Linotype equipment and latest improvements. The latter can be made available to schools actually operating linotype machines.

Other materials offered for school use are pamphlets: *A Handy Digest of Today's Most Popular Body Faces*, *Copy Fitting Method*, *Brief Notes On Type Design*, *The Romance of Print*, a souvenir matrix of the smallest reproducible font of caps in the world, and technical wall charts showing features of the linotype machine. The company also supplies a 229 page book, *One Line Specimens of Linotype Faces*, at less than cost (\$2.50). All materials are available from Mergenthaler Linotype Company, 29 Ryerson Street, Brooklyn 5, New York.

Printing Needs to Use the Audio-Visual Media

• A SEE & HEAR EDITORIAL •

THE PRACTICAL ARTS of communication have fortunately kept pace with our complex technology and with the needs of men for understandable knowledge interestingly presented. That is the mission for motion pictures and filmstrips in the printing classroom, within our schools and in the printing industry itself. But they're not using them.

The utter lack of knowledge about their availability is one apparent reason . . . little general information such as this report contains has been printed. The printing teacher easily realizes the inspirational value of a motion picture on the history of printing or the value of a lighted color filmstrip on type. *Most Americans are fully aware of the film's potentialities.* In our contacts, the printing plant owner who has even briefly studied the possibilities of informal "appreciation" sessions based on a weekly film program becomes most enthusiastic.

We think the people who have most to gain are in the printing industry itself . . . though we feel that their potential "audiences" will gain even more in appreciation of their work and in actual craftsmanship. Therefore we urge the printing equipment manufacturers, the suppliers of basic commodities such as ink and paper, and the printers to give serious consideration to the widespread promotion and use of existing films and to the possibilities of many more titles to fill the easily apparent "holes" in our present resources.

Finally, we directly commend to such firms as American Type Founders, Harris-Seybold, Hoe, Intertype, Ludlow, Miehle, Mergenthaler, and others that they investigate the tremendous possibilities of the simple and economical filmstrip. Read what this inexpensive tool can do on pages 16 and 17 of this issue; envision if you will low-cost, purchaseable "kits" of filmstrips on the Masters of Printing, on Design Fundamentals, Color Balance, and the host of other apparent subjects which do not require motion to achieve the utmost of interest while delivering maximum information on the large, lighted screen. Concentration of interest, clarity of material, and other advantages are inherent to an enormous and as yet, too-little appreciated, extent in the very low-cost filmstrip. Projection equipment is equally simple and inexpensive. It goes without saying that motion pictures can and will continue to play their important part in extending such a program in the school and in the printing plant. ●

Motion Pictures and Filmstrips On the Graphic Arts

BOOK PUBLISHING MOTION PICTURES

ART IN BOOKBINDING. (4 min) 16mm. Rental: Bray.

• Description of processes involved in bookbinding, including edge gilding. BINDERY OPERATIONS. (45 min) 16si.

With commentary. Free loan: Western.

• What happens after printed sheets leave the presses; the extent and nature of the work done by the bindery, with its cutters, folders, stitchers, binders, case-makers, casing-in machines and other special-purpose apparatus.

BOOK GOES TO MARKET. A. (22 min) 16sd. Color. Apply, loan: Chicago Tribune.

• Here is a camera study of the making of books and the potential for book sales based on public interest, with suggestions for bookstore selling practices to get maximum results at the cash register.

BOOKS (10 min) 16sd. Purchase: Hoffberg.

• Following a discussion of the part literature plays in our lives, the production goes into detail on the subject of how books are made.

BOOK OF BOOKS. THE. 16mm. Free loan: Nat'l Bible.

• Seeing the Bible printed and bound, with scenes illustrating its importance in daily living and its transmission down to us through the ages.

BOUND TO LAST. (15 min) 16sd. Ganz.

• A study of various hand and machine operations in book binding and other binding crafts. Sequences were shot in the Library of Congress, the Government Printing Office, and the New York Public Library. Here is shown the work of the copyreader, monotype-keyboard operator, linotype operator, proofreader, compositor, operators of the folding machine and the gathering machine, and others.

COVER TO COVER. (10 min) 16sd. Rental or purchase: Brandon.

• Publication processes, traced step by step.

ELEMENTARY BOOK BINDING. (10 min) 16sd. Purchase or rental: Brandon.

• Book binding by hand is the subject, with illustration of the materials and work involved in the process.

MAKING A BOOK. (15 min) 16sd. Purchase: EBF.

• A multitude of processes is covered in the quarter-hour of running time. Among them are the manufacture of paper, editing, composition, electrotyping of the text, making halftone illustrations, printing, folding, cutting, gathering, binding and trimming.

NEW BOOKS FOR OLD. (30 min) 16si. Purchase or rental: Western Reserve.

• Preparing worn books for the bindery and employing the "library binding method" for rebinding.

PRODUCTION OF BOOKBINDING FABRICS. THE. (20 min) 16sd. Free loan: Holliston.

• The subject of fabrics used in the binding of books, and the production of them, is covered in the two-reel film.

COLOR

NATURE OF COLOR. THE. (10 min) 16sd. Color. Purchase: Coronet.

• Applications of color principles to printing, photography and painting. First is demonstrated Newton's ex-

planation of the rainbow, then the principles of color reflection and absorption are defined and the mixing of colors by addition and subtraction. (Collaborator: Ira M. Freeman, Ph.D., associate professor of physics, Rutgers University.)

ELECTROTYPING MOTION PICTURES

CHEMICAL EFFECTS OF ELECTRICITY. (15 min) 16si. Purchase: EBFilms.

• Subjects taken up are electrolysis, electroplating, electrotyping, making copper anodes, and the production of aluminum from bauxite by electrolysis.

MANUFACTURING OF ELECTROTYPES AND MATS. THE. 16mm. Free loan: Rapid Electro.

• Pictorial resume of the making of electrotypes and mats.

FILMSTRIPS

ELECTROLYSIS. (42 frames) 35si. Purchase: McGraw.

• Electric decomposition of a liquid is explained in terms of the theory of ionization, followed by practical applications of electrolysis, especially in the electrolytic principles used in commercial electroplating processes.

ENGRAVING-PHOTO MOTION PICTURES

HEIGHTS AND DEPTHS. (10 min) 16sd. Jam Handy.

• Shown is the making of engravings, also of reproductions from woodcuts, zinc etchings from line drawings, halftone photographic reproductions for both flat bed press and cylinder or rotary press, and photogravure pictures.

MODERN PHOTO-ENGRAVING. (15 min) 16sd. Color. Kodak.

• A presentation of step-by-step production of four-color process plates, following the plate-making from the art room to the press room, with over-the-shoulder glimpses of the work of the skilled craftsmen who participate in making the plates.

INKS

GRAPHIC ARTS MARCH ON. THE. (28 min) 16sound-color. Free loan: Sinclair-Valentine.

• The development of color in the United States and its application by the company to ink for various methods of printing.

RAINBOWS TO ORDER. (21 min) 16sd. Color. Loan: Int'l Printing Ink.

• This successor to an older film, *Keeping in Touch*, takes up the sub-

Notes About the Listings

• Following subject titles, each listing shows the running time of the film, if a motion picture, thus (4 min.); also whether sound (sd) or silent (si). Free loan or loan designates sponsored subjects where only transportation costs are charged the borrower in most cases. Rental or Purchaseable subjects are also denoted. The complete list of sources appears on page 15. Please note that 16sd. refers to sound motion pictures which must be run on sound projectors. This is most important.

ject of printing and printing inks in the light of all the new developments in the field.

SERVING THE GRAPHIC ARTS. (23 min) 16sd-color. Free loan; Sinclair-Valentine.

- Ink manufacture, from raw materials to delivery to the customer; letterpress and lithographic inks, dry colors, and varnishes.

LITHOGRAPHY

BETTER RUN FOR YOUR MONEY, A. (20 min) 16sd. Color. Loan; Harris-Seybold-Potter and Modern.

- In an exposition of the importance of printed salesmanship, the film points out what makes it effective and goes on to show the economies in the use of lithography.

HOW TO MAKE A GOOD IMPRESSION. (20 min) 16sd. Color. Loan; Harris-Seybold-Potter and Modern.

- Lithographic printing explained for those who purchase printing for any purpose. Preparation and reproduction of a typical job is taken through a lithographer's shop, with explanation of the basic differences between lithography and letterpress and gravure.

MODERN LITHOGRAPHER. (10 min) 16sd. EBFilms.

- The technique of lithographic artists and the processes of duplicating black and white and color originals by means of direct and photo-offset lithography. The roles of the commercial photographer and the modern printing press in mass production of prints and advertising materials.

PHOTO-LITHOGRAPHY. (45 min) 16mm. Color. Apply; Kodak.

- The application of new photographic developments to the field of lithography.

MAGAZINES

MAGAZINE MAGIC. (33½ min) 16sd. Color. Loan; Modern.

- Some of the steps in the preparation of five Curtis Publishing products, among them the Ladies' Home Journal, Holiday, and The Saturday Evening Post.

MAKING OF A MAGAZINE, THE. (43 min) 16sd—Color. Free loan; Dearing.

- A magazine issue, from editor to newsstand. Shown are offset processes, plate making, rotogravure processing and printing, rotary and cylinder presswork, foundry work, binding, trimming, and mailing.



Scene in EBFilms "Newspaper Story"

NEWSPAPERS

MOTION PICTURES

DEMOCRACY'S DIARY. (16sd. Apply; Inst. Vis. Trng.

- How the New York Times staffs collect the news and publish it. Scenes in the photo transmission room and the printing plant help to fill out the story.

EDITOR'S NOTE BOOK, THE. (31 min) 35-16mm sd. Free loan; Modern.

- Taking its title from the editorial column of John S. Knight, editor and publisher, the production is the story of the Chicago Daily News from the days of Melville Stone and Victor Lawson. Outstanding sequences include two reporters' feature series on "Skid Row," a girl reporter's prison investigations and other Pulitzer Prize achievements.

JOURNALISM. (10 min) 16sd. Rental; Assn.

- High spots in the life of a newspaper reporter. The film presents an instructive lesson on the job as a profession, not the romantic hoopla of theatrical flights of romance and fancy.

LET'S GO TO PRESS. (12 min) 16sd. Purchase; Scandia.

- A depiction of the long struggle for freedom of the press in Sweden and the complicated procedure of putting out a modern daily newspaper.

MIRACLE OF MILLIONS, THE. (40 min) 16sd. Color. Loan; N. Y. News.

- A kaleidoscopic review of what happens in the gathering and writing of news before an edition of a large New York daily goes to press.

NEWSPAPER STORY. (16 min) 16sd. Purchase or rental; EBFilms.

- Using as a continuity thread the

story of the finding of a lost child by Boy Scouts, the production shows many of the operations involved in printing a newspaper of today, including the work of the reporters, the editors, the personnel of the linotype and composing rooms, and the part played by the huge presses which automatically trim and fold. (Collaborator: Dr. Kenneth E. Olson, dean of the school of journalism, Northwestern University.)

SPOT NEWS. (10 min) 16mm. Sale; Jam Handy.

- Shown are applications of the basic principles of the transmission of wire photos. The photo is scanned by the photo-electric eye, then transmitted as an electric current.

STORY THAT COULDN'T BE PRINTED, THE. (11 min) 16sd. Apply; TFC.

- The career of John Peter Zenger, pre-Revolutionary printer and publisher, who was persecuted, arrested and tried on a charge of publishing forbidden reports.

TREES TO TRIBUNES. (40 min) 16sd. Color. Loan; Modern.

- A comprehensive picture of the operations of a newspaper, from the cutting of a tree in the Far North, to the processing of woodpulp into paper, and the final appearance as a printed newspaper.

FILMSTRIP

NEWSPAPER, THE. (44 frames) 35si.

- With text. Purchase; Stillfilm.
- The story of a newspaper, from the forest to the delivery of the home edition at the subscriber's doorstep.

PAPER MANUFACTURE

MOTION PICTURES

GIFT OF T'SAI LUN—PAPER. (32 min) 16sd. Part color. Hammermill.

- A history of the paper industry down through the ages, opening with a portrayal of the work of T'Sai Lun, Chinese scholar, in inventing paper. A step-by-step account of the operations involved in papermaking follows, from logging to the shipping of finished paper.

NEWSPRINT. (23 min) 16sd. Loan; CanNFB.

- The cycle of newsprint production.

RIGHT: A scene in "The Editor's Notebook," a documentary sound film on the history and recent editorial campaigns of The Chicago Daily News, now available to graphic arts and journalism classes, primarily in mid-western states on a free loan basis.



(CONTINUED FROM PRECEDING PAGE)
from the first timber cruise to the rolls of print paper speeding down the sloping railway to the ship waiting to take it overseas. Most of the shooting of the forest scenes was done above the north shore of the St. Lawrence river in Quebec.

PAPER. (11 min) 16sd. EBFilms.

- The story of paper making, from the felling of timber to the product for the presses of the world.

PAPER COMES TO LIFE. (30 min) 16sd. Apply: Champion.

- From forest to packing, the production traces the manufacture of Champion paper, including the various processes in the mill.

PAPER FORESTS. (11 min) 16sd. Purchase or rental: Assn.

- The production of paper pulp, phase by phase: cutting trees, hauling the logs to rivers, coping with the spring thaws, driving the logs downstream to sorting bins, arrival at the paper mill, and processing.

PAPER MAKING. (20 min) 16sd. Purchase: Coronet.

- Detailing the processes involved in converting trees from the forests of the United States and Canada into paper. Animated diagrams explain the actions of the digester and the bleacher. Seen in operation are the large paper machines and the calendaring apparatus, followed by the testing of the paper in research laboratories.

PAPER—PACEMAKER OF PROGRESS. (20 min) 16sd. Color. Free loan. purchase: Huyck.

- A pictorial study of the part paper has played in the progress of civilization.

PARTNERSHIP WITH NATURE. IN (20 min.) 16sd. Color. Free loan. Intl. Paper.

- A 1951 color motion picture which is one of the most comprehensive films on paper manufacture from forest to the consumer now available. Brilliantly produced with animation sequences on tree growth, reforestation scenes, and paper manufacture including the extensive Southern Kraft operations of the sponsor.

PULLING POWER OF PRINTING BRISTOL. (17 min) 16sd-color. Apply: Linton.

- The use of Bristol for direct advertising, demonstrated by displays of commercial jobs; reasons for use; how it is manufactured.

PULP AND PAPER FROM CANADA. (23 min) 16sd. Purchase or loan: CanNFB.

- Cutters felling the giant trees of the west and lumberjacks working out of the eastern bushcamps introduce the story, which carries the log by river, lake and sea to the mill, where it is ground or chopped, goes through a series of machines and comes out in huge sheets of paper. (Produced in cooperation with the Canadian Pulp and Paper Association.)

SHORT COURSE IN PAPER MAKING. (30 min). 16sd. Loan: Glatfelder.

- The complete manufacture of fine papers in a modern mill, beginning with the cutting of the trees from which the wood pulp is obtained and continuing through the successive processes. Also presented are such indirect processes as power and steam production, water infiltration, laboratory testing and control, and the reclamation of unused material.

STORY OF PAPER MAKING. (34 min) 16sd. Color. Apply: Intl Paper Co.

- A film presentation of the extent and methods of operation of the company. To employees it gives facts concerning the areas of activities; to shareholders, the nature of the investment and the integrated operations; to townspeople, the practice of good citizenship; and to buyers and public, a picture of widespread interests and a well-run concern. The film points out that trees are a crop and the company works in partnership with nature to insure sustained yields; checks all forest plans with the Government; emphasizes precautions to avoid fires; and spends a million dollars a year to educate its people.

USE OF FORESTS. (10 min) 16sd. B & W or color. Purchase: Coronet.

- From daily newspaper to fishing pole, maple syrup to rayon dress, the myriad uses of our forests are spanned in the production, which takes the audience to the great forest areas for a study of the most important and valuable types of trees. (Collaborator: Thomas F. Barton, Ph. D., associate professor of geography, Indiana University.)

WORLD BEHIND A WATER MARK. THE. (30 min) 16sd-color. Free loan: Nekoosa-Edwards.

- The production covers the complete operations, from logging through the processing of the paper at the mill.

WORLD OF PAPER. THE. (29 min) 16-35si. Loan: GE.

- A tracing of the art of writing from the age when primitive man carved

figures in stone, through the Egyptian era with its use of papyrus. The discovery of paper by the Chinese is pictured. Finally, the film shows twentieth-century paper production and the electrically-driven machinery which carries a thin ribbon of paper through many tons of steel.

FILMSTRIP

PAPER IN THE MAKING. 35mm. Purchase: SVE.

- Tracing the processes in the manufacture of paper.

PAPER CUTTERS

CLEAN CUT PROPOSITION. A. (15 min)

16sd-color. Free loan: Harris-Seybold.

- Seybold cutters compared with other types, in a film used by salesmen as a portable demonstration of the cutting machine in action.

PHOTOGRAPHY

MOTION PICTURES

EXPOSURE AND EXPOSURE METERS. (15 min) 16si. Rental: RFA.

- Examples are followed by suggestions for obtaining properly exposed pictures.

EYES OF SCIENCE. (45 min) 16si. Bausch & Lomb.

- The physical aspects of lenses are explained in this subject sponsored by the lens manufacturing company.

FAMILY ALBUM. THE. (30 min) 16sd. Color. Free loan: GE.

- The triangle lighting formula for indoor photography is the theme of this half-hour production, which goes on to point out how many lamps should be used and how they should be placed.

FUNCTIONAL PHOTOGRAPHY IN INDUSTRY. (36 min) 16sd. Free loan: Kodak.

- How photographic techniques are applied in various ways in industry is given case-history treatment in this motion picture, available from the Eastman Kodak Company.

FUNDAMENTALS OF PHOTOGRAPHY SERIES. (5 films) 16sd. Purchase: Castle Films (div. of United World).

- Five films on still and motion picture photography, produced for the U. S. Navy for the training of Navy photographers. The titles are: *Basic Camera, The, Developing the Negative, Elementary Optics in Photography, Light-Sensitive Materials and Printing the Positive.*

GOOD PHOTOGRAPHY IS FLASH PHOTOGRAPHY. (25 min) 16sd. GE.

- In slow motion is shown the shutter

in action, followed by explanations of the synchronizer and flash bulb characteristics.

HOW TO USE FILTERS. (15 min) 16si.

Rental: RFA.

- First defining the theory of filters, and filter factors, the film treatment of the subject proceeds to a discussion of the various types—colored, diffusing, and polarizing; a comparison of results with each type, and the care required in handling filters.

PHOTOFILMS. (3 films, each 10 min)

16sd. Purchase or rental: Allen-Moore.

- In Part I, Edward Weston, dean of American photographers, is seen at work in his studio, and the steps in developing the negative are explained. In Part II, Karl Freund demonstrates accuracy in shutter testing and aperture rating, and a professional photographer shows how to use portable lighting equipment. Part III has Weegee explaining his technique, Ernest Bachrach showing the uses of his multipurpose tripod, and Erven Jourdan and Shew Lum pointing out the basic methods of fashion photography.

PHOTOGRAPHY. (10 min) 16sd. Voca Guidance.

- Various phases of photography as a vocation and its use in publishing, advertising and other industries in science and entertainment. Shown are works of portrait, illustrative and commercial photographers.

FILMSTRIPS

CARE AND CLEANING OF PHOTOGRAPHIC LENSES. AAF-Castle FSI-43.

- Emphasizing the need of care of the lens in order to insure proper functioning and precautions to be observed in using them, the production then illustrates the proper methods of cleaning.

CONTACT PRINTING. (58 frames) 35si.

Purchase: McGraw.

- The process of making contact prints, using both a printing box and a printing fane, is followed from beginning to end.

DEVELOPING ROLL FILM NEGATIVES.

(58 frames) 35si. Purchase: McGraw.

- Explained in operation are the standard procedures for developing, fixing, washing, drying and storing film negatives, using both tank and tray methods.

DEVELOPING SHEET FILM AND FILM.

(44 frames) 35si. Purchase: McGraw.

- The filmstrip presents the standard procedures for developing, fixing, washing, drying and storing sheet film negatives and film pack negatives.

HISTORY OF PHOTOGRAPHY. THE. (51 pictures) Vis Sci.

- A documentary of the more important milestones in the development of the basic physical and chemical principles of photography, beginning with the incident of the finding of a battered lens in the ruins of Nineveh 1,000 years B.C.

PHOTOGRAPHIC DARKROOM PROCEDURES. (Series of 6 filmstrips). 35si.

Purchase: McGraw.

- Developing and printing are taken through all the steps of operations in the darkroom in the series of productions.

PROJECTION PRINTING. (In two parts).

35si. Purchase: McGraw.

- Part I (49 frames): Operation of an enlarger and the procedure of projection printing up through the making of a test print to determine correct exposure time. Part II (40 frames): The steps in making a full-scale print of the same negative used in Part I. Both matte and glossy prints.

PROPERTIES OF PHOTOGRAPHIC LENSES. AAF-Castle FSI-47.

- Subjects discussed are the following: function of the lens; pinhole lenses; focal length of lenses; size of the image; the necessity for focusing the lens; and inversion of the image.

SPOT PRINTING AND DODGING. (43 frames) 35si. Purchase: McGraw.

- The techniques of print improvements are explained, with illustration of how they are put into practice.

PRESSES*

MOTION PICTURES

ANOTHER MAN'S BUSINESS. (20 min)

16sd. Color. Loan: Miller Printing.

- Production of the intricate printing press of today is traced from the engineering department to the pilot model and manufacture and then the final assembly and operation. Tools and gauges that implement presswork also are presented.

ADVANCEMENTS IN PRINTING PRESS DESIGN. (23 min) 16mm. Free loan:

Miehle.

- Problems of methods of feeding, registering and delivery of the sheet on the Miehle 61 Offset Press.

LOOK TO THE YEARS AHEAD. (30 min)

16sd. Color. Apply: Miehle.

*also see Lithography on previous page.



ABOVE: A scene in the International Printing Ink Company's color motion picture "Rainbows to Order" available for graphic arts classes in schools and plants.

Free loan to organizations in the graphic arts or allied fields.

- The picture tells the story of the modernization of a printing plant typical of hundreds of plants in small parts of the country. It gives a careful factual analysis of how the work could be more effectively handled on up-to-date equipment. Emphasis is on the small Miehle letterpresses.

PRINTING

MOTION PICTURES

HERE'S HOW WE PRINT. (11 min)

16sd. B & W or white. Purchase: Bailey.

- In this teaching film three basic operations are followed through: the selection and setting of type for a simple sentence, making up and locking up the type, and finally printing from type with a hand-operated press.

PRINTING. (11 min) 16sd. Voca Guidance: Mahnke.

- A description of various jobs in a printing establishment, such as compositors, pressmen, bindery, layout, linotype and monotype setters, and proofreaders. In operation are shown the letter press, rotary, offset and the newspaper cylinder press, with a discussion of the skills required by the various operators. Outlined are training in hand composition, printers arithmetic, word division, hand-fed press operation, and small automatics. NOTE: 35mm silent filmstrip on printing as a vocation is purchaseable from the above source.

STORY OF PRINTING. (40 min) 16sd.

Purchase or rental: EBFilms.

- Produced for the British Central Office of Information, the film reviews the thousands of years of effort out of which finally evolved modern letterpress printing. Introductory

(CONTINUED FROM PRECEDING PAGE)
 scenes are of the impressing of the Babylonian seal upon clay, early Chinese and Japanese prints, the hand pressing of pictures in the Renaissance. Comes the secret work of Gutenberg in the manufacture of movable type and development of a method of making print impressions out of an adaptation from a wine press. Diagrams show the spread to Europe. Type styles and paper improvements then are brought up to date.

FILMSTRIP
WRITING AND PRINTING. (27 frames) 35s with text. Color. Purchase: EyeGate.

- Here is pictorialized history of writing and printing. First shown are the discoveries of the Chinese and the work of Gutenberg. The story is brought up to date with comment on the inventors of the monotype, linotype and rotary press.

TYPE & LOCK-UP
MOTION PICTURES
BLUE STREAK LINOTYPE MACHINE. THE. (25 min) 16sd. Free loan: Mergenthaler.

- Operation of the Blue Streak linotype machine model 31 is shown in detail, with considerable descriptive matter on the sound track. The film is distributed as part of an educational exhibit to schools and other institutions teaching vocational training.
- RIEHL TIE UP, A.** (20 min) 16sd. Color. Loan: Am. Type Founders.
- A demonstration of the Riehllock, easily adjusted galley lock for use by printers instead of tying type with string. Narration was by Lew Lehr.
- TYPE SPEAKS.** (25 min) 16sd. Color. Loan: Am. Type Founders.
- All the way from Gutenberg to the intricate printing processes of today, the production tells the story of movable type, and how foundry type is made and used.

This film recreates the many varied uses of foundry types by the artist, designer, and printer; shows thousands of useful applications.



Another scene in "Newspaper Story"

SOUND SLIDEFILMS
 (See Special Insert Opposite)

FIVE CENTURIES OF TYPE FOUNDING. (30 min) sd. Free loan: Am. Type.

- The history, development and present day applications of a selected group of type faces, including Old Style, Modern Roman and their "family trees." Also shown are contemporary ATF display faces, with the names and dates of their designers.

TYPE AND ITS ORIGIN. (16 min) sd. Color. Purchase: Mosen.

- An educational introduction to type, showing many different faces, from the past and present-day usage, and how they are used by advertising agencies and generally. The production first points out the essential nature of type in fulfilling man's need for communication, also the cultural element of reflecting trends of taste. The audience is taken from the days of the caveman with his wall paintings—the use of rope knots for movable messages, the picture codes, the Greek and Roman alphabets, the major printing styles of medieval manuscripts (ancestors of modern print types), the decorative faces of French printing, and finally the attention-getting types of today which add punch to advertising. For customers and schools.

A Word to Film Users

- ♦ Some excellent and related films have been omitted from these pages because of distribution limitations. Only films generally available on a national basis are included. Earlier silent 16mm films have also been omitted because of their early production dates.

FILMS OF ALLIED FIELDS

ADVERTISING

THE MAGIC KEY. (20 min) 16sd. Color. Purchase: Wolff.

- The influence of advertising in giving America the high standards of living it enjoys today. A winner in the 1950 Freedoms Foundation Awards, prints of the production are being purchased by civic, educational and business leaders for showing to management, employee and consumer groups.

CIRCULATION

NOW WE KNOW. (20 min) Loan: ABC.

- A film biography of the Audit Bureau of Circulations. After showing the difficulties experienced by oldtime advertisers and publishers in attempting to establish circulation standards, the action moves on to the organization of the A.B.C. and how it functions today.

GRAPHS

LANGUAGE OF GRAPHS, THE. (10 min) 16sd. B&W or color. Purchase: Coronet.

- A huddle over the financial and circulation problems of the school newspaper brings up the subject of graphs and how they sum up a situation, clearly and rapidly. Explained are bar, line, circle and equation graphs to picture relationships and make comparisons. (Collaborator: H. C. Christofferson, Ph.D., professor of mathematics, Miami University, Oxford, Ohio).

SILK SCREEN

MAKING A SERIGRAPH. (30 min) 16sd. Color. Purchase or rental: Harmon.

- The technique of producing original art work in four colors using the silk screen.

TECHNIQUE OF THE SILK SCREEN PROCESS. (15 min) 16si. Purchase or rental: Brandon.

- From the first subject transfer to the finished print, the silk screen process is presented on film.

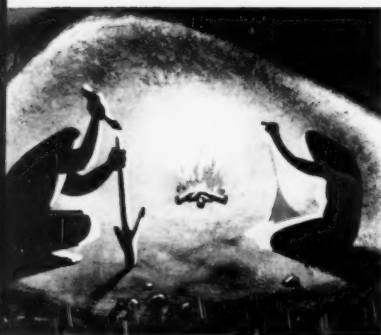
SILK SCREEN PROCESS. (20 min) 16sd. Purchase: Library Film.

- The technique of silk screen printing; details of making the screen and then printing; one-color and vari-color work.

SILK SCREEN PRINTING. (20 min) 16sd. Purchase: Library.

- From the assembling of the necessary materials to the finished articles, a complete step-by-step description.

SEE AND HEAR



LEFT: The primitive caveman "wrote" the story of his time on stone. Today "The Magic Key" of advertising pushes forward increased productivity and a higher standard of living. The film of that title is a remarkable exposition on all forms of advertising. Prints can be purchased outright from the producer, Raphael G. Wolff. (See above.)

a preview...

**fascinating story of the printed word... in full, glowing color
now made available to teachers for the first time**

Here is an outstanding sound slidefilm: "*Type and its origin*." You and your pupils see Man as he struggles to record his thoughts. You follow the evolution of Writing from the first crude pictographs up through the most modern typography. You see (and hear described) authentic examples of the important steps in the development of the printed word.

To give you an idea of the scope of this film, here are 22 of the 96 frames which make up the presentation...



1 Early in the sound slidefilm, we see primitive man first experimenting with graphic methods, as he records the outline of his hand on cave walls.

(continued on next page)



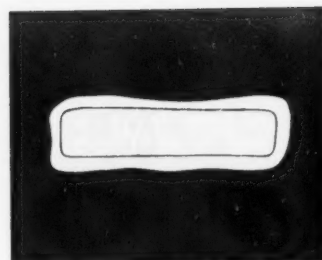
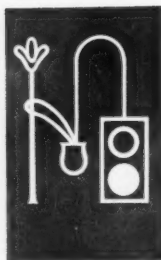
"Type" and its origin"



2. Man's next step toward writing is crude illustration. In pictures like this prehistoric sketch of bison he expressed more complicated ideas. But gradually such realistic drawings gave way to symbols.



3. At left, for example, are a reed case, pigment sack, and palette—the tools of an early writer. And the symbol at right means "writer." Thus early man simplified his pictures into a code.



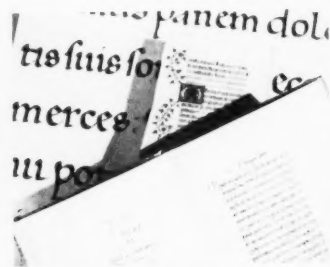
4. The Egyptians developed a system of picture writing called hieroglyphics. Above, for instance, is a hieroglyphic writing of the name "Cleopatra," with symbols representing her sex and rank.



8. As civilization spread westward through Europe, writing spread with it, and became an essential part of living. During some 13 centuries the scribes developed manuscript writing to a high art.



9. The letters gradually changed to shapes that flowed fastest from the scribe's pen. By the 8th Century, European scribes had developed two complete alphabets—capital letters and small letters.



10. The 3 important styles were: (upper left) Humanistic, a basically Roman script; (center) Gothic, angular letters from north Italy; (bottom) Cursive, a flowing style used by the church.



14. Claude Garamond was the first commercial type founder. Besides designing type faces, he made them in a variety of sizes. His are among a number of famous old designs still popular.



15. Among the pioneers in American typography and printing was the famous patriot, Benjamin Franklin. The work of Franklin and other early Americans had simplicity and directness of approach.



16. But in Europe the French were leading the way into an era of elaborate decoration and ornate faces in typography. Soon no white space on a page could escape decoration of some sort.

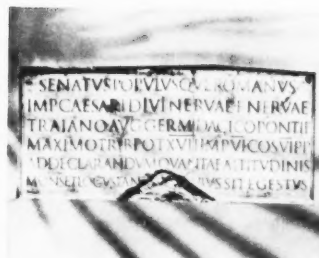




5. Each symbol lost all pictorial significance, and simply represented a sound in the pronunciation of Cleopatra's name. For the first time, speech had become closely linked with visual expression.



6. But man needed a faster, easier means of written expression. From this need grew the first alphabet. About the year 500 B.C., the Greeks were cutting letters like this in stone.



7. The Roman alphabet is the basis of our own. The beautiful proportions of the Roman letters have never been surpassed. This engraving on the Trajan Column (about 100 A.D.) is a good example.



11. The manuscripts often were decorated with gorgeous illuminations like this. But as more and more people learned to read, the scribes began falling far behind in supplying enough literature.



12. To multiply the output of books, the first crude attempts were made to print the books. At first whole pages of letters and illustrations were cut in wood blocks and pressed onto paper.



13. The next logical step was to create movable type. The first great book printed from such type was the 42-line Bible, attributed to Gutenberg. The printed page resembled a hand-lettered page.



17. The trend toward decoration spread rapidly throughout the arts. Clothing, furniture, fixtures, even houses, soon were smothered in elaborate trappings, and took on extreme or fanciful forms.



18. During this period, advertising designers showed more concern for decoration than for legibility and effectiveness. This department store advertisement is quite typical of its era.



19. But the 'automobile age' ushered in a new approach to typography. Modern, functional machines called for modern, functional advertising. This Autocar ad is straightforward and simple.



(continued on next page)



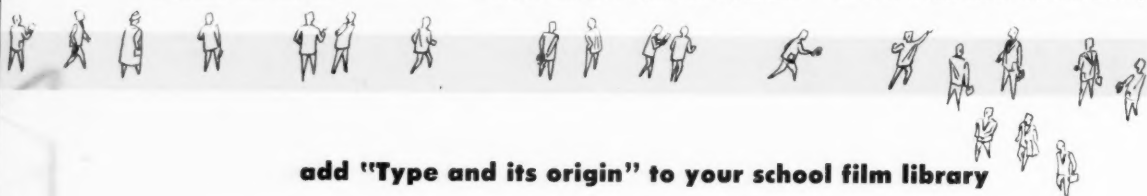
20. Today's auto advertising still is a good example of the new approach to typography. Artists and typographers have joined forces to create clean, readable, beautiful page designs.



21. Our magazines have changed and adapted formats and layout to capture interest quickly in the new competition for attention. Compare the appeal of this modern magazine with its predecessor.



22. Today typography is alert to the needs and moods of everyone who writes and reads. Tomorrow, as the needs and moods change, type will be first to speak with the voice of the new day.



add "Type and its origin" to your school film library

Only \$17.50
96 full-color frames

Available with 78 or 33 $\frac{1}{3}$ RPM records.
Playing time 16 minutes.

Every student obtains much of his schooling through printed words. So isn't it reasonable for you to give him some background on the development of the printed word itself?

Monsen—one of the nation's leading typographic houses—now offers "*Type and its origin*" to schools for the first time . . . at a small fraction of its cost . . . only \$17.50. This instructive sound slidefilm is free of commercialism. It is perfectly suited for use in your classrooms.

A companion booklet entitled "*Type and its origin*" has also been prepared for your classroom distribution.

Written in straightforward language, it helps your pupils retain what they learn from the film. The first copy is free. Additional copies cost only 10¢ each (special discount on quantities).



To obtain the film, send the coupon below, with your check or money order in time to use "*Type and its origin*" during your present school term. If for any reason the film does not fit into your curriculum, you may return it within ten days and have your money refunded.



sample booklet . . . FREE

Check the box at right to get your free copy of the booklet "*Type and its origin*"—whether or not you are now ordering the film. Absolutely no obligation!

mail this coupon today to

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MY NAME _____ MY TITLE _____

SCHOOL _____

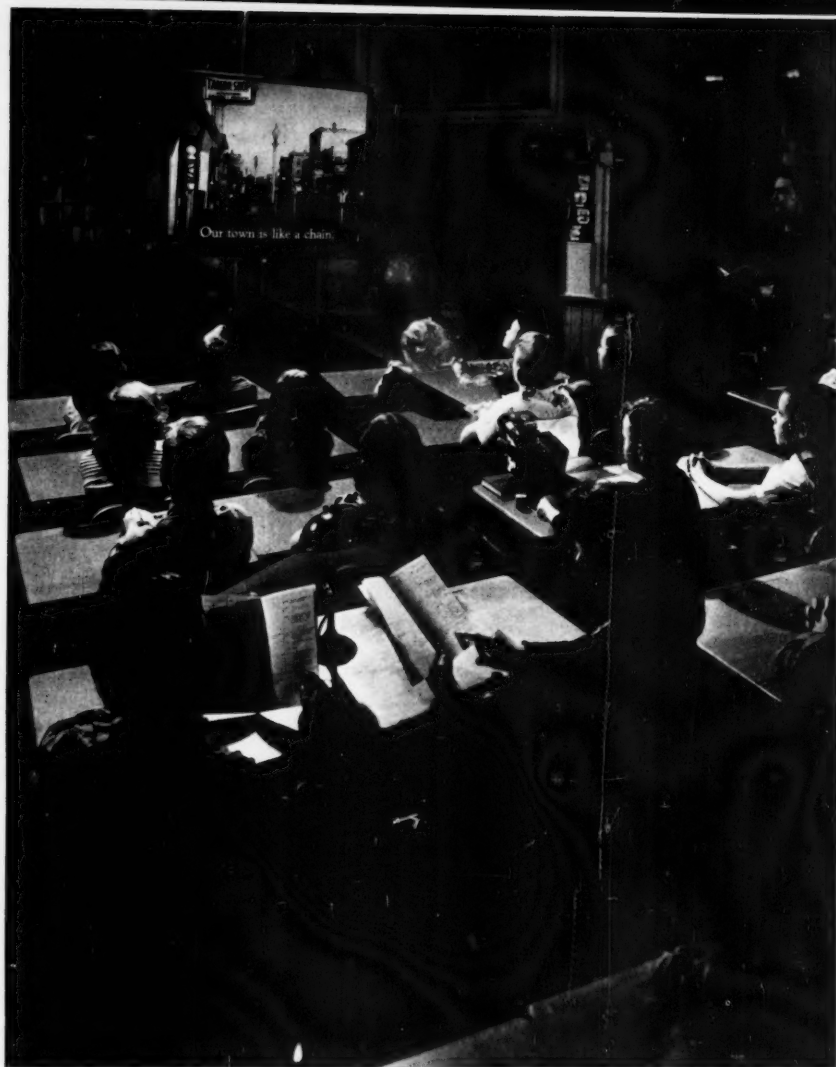
STREET ADDRESS _____

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Sources of Graphic Arts Films

- ALLEN-MOORE: Allen-Moore Productions, Inc., 213 W. Seventh St., Los Angeles 14, Calif.
- AM: TYPE FOUNDERS: American Type Founders, Inc., Elizabeth, N. J., or your local ATF Sales Corporation.
- ASSN: Association Films, YMCA Motion Picture Bureau, 35 W. 45th St., New York City 19; 206 So. Michigan Ave., Chicago, Ill.; 351 Turk St., San Francisco, Calif.; 1915 Live Oak St., Dallas, Texas.
- ABC: Audit Bureau of Circulations, 123 N. Wacker, Chicago 6.
- BAILEY: Bailey Films, Inc., 2044 Berendo St., Hollywood 27, Calif.
- BRANDON: Brandon Films, 200 W. 57th St., New York City.
- BRAY: J. R. Bray Studios, 729 Seventh Ave., New York City 19.
- BAUSCH: Bausch & Lomb Optical Co., 635 St. Paul St., Rochester, N.Y.
- CANFEB: National Film Board of Canada, Suite 2307, RKO Bldg., 1270 Avenue of the Americas, New York City 20; 400 W. Madison St., Chicago 6, Ill.
- CASTLE: Castle Films, 1445 Park Ave., New York City 29; 542 S. Dearborn St., Chicago 5, Ill.; 7356 Melrose Ave., Hollywood 46, Calif.; Russ Bldg., San Francisco.
- CHAMPION: Champion Paper & Fibre Co., Advertising Dept., Hamilton, Ohio.
- CHICAGO TRIBUNE: Chicago Tribune, Public Service Bureau, 1 S. Dearborn St., Chicago, Ill.
- CORONET: Coronet Instructional Films, 65 E. South Water St., Chicago 1, Ill.
- DEARING: C. T. Dearing Printing Co., Broadway at 11th St., Louisville 1, Ky.
- EBF: Encyclopaedia Britannica Films, Inc., 1150 Wilmette Ave., Wilmette, Ill.
- EYE GATE: Eye Gate House, Inc., 330 W. 42nd St., New York 18, N.Y.
- GANZ: William J. Ganz, 40 E. 49th St., New York City.
- GE: General Electric Co., Visual Instruction Section, 1 River Road, Schenectady, N. Y.; Branch offices: 920 SW 6th Ave., Portland, Ore.; Department of Visual Instruction, U. of California, Berkeley, Calif.; 235 Montgomery St., San Francisco, Calif.; 212 No. Vignes St., Los Angeles, Calif.; 200 So. Main St., Salt Lake City, Utah; 650 17th St., Denver, Colo.; 1801 N. Lamont St., Dallas, Texas; 4966 Woodland Ave., Cleveland, Ohio; 187 Spring St. NW, Atlanta, Ga.; 1405 Locust St., Philadelphia, Pa.; 570 Lexington Ave., New York City; 140 Federal St., Boston, Mass.; 340 So. Canal St., Chicago, Ill.
- GLATFELTER: P. H. Glatfelter Co., 223 So. Main St., Spring Grove, Pa.
- HAMMERMILL: Hammermill Paper Co., Advertising Dept., East Lake Rd., Erie, Pa.
- HARMON: Harmon Foundation, Division of Visual Experiment, 140 Nassau St., New York City.
- HARRIS-SEYBOLD-POTTER: Harris-Seybold-Potter Co., 4510 East 71st St., Cleveland 5, Ohio.
- HOFFBERG: Hoffberg Productions, Inc., 362 W. 44th St., New York City 28.
- HOLLISTON: The Holliston Mills, Inc., Norwood, Mass.
- HUYCK: F. C. Huyck & Sons, Rensselaer, N. Y.
- INST. VIS. TRNG.: Institute of Visual Training, 40 E. 49th St., New York City.
- INT'L PRINTING INK: IPI Div. of Interchemical Corp., 67 W. 44th St., New York 18. Attn. George Welp.
- INT'L PAPER: International Paper Co., 220 E. 42nd St., New York City 17.
- KODAK: Eastman Kodak Company, Rochester, N. Y.
- JAM HANDY: The Jam Handy Organization, 2821 So. Grand Blvd., Detroit 11, Mich. Regional offices at 1775 Broadway, New York City 18; Transportation Bldg., Washington 6, D.C.; 917 Liberty Ave., Pittsburgh 22, Pa.; 310 Talbott Bldg., Dayton 2, Ohio; 230 Michigan Ave., Chicago 1, Ill.; 7046 Hollywood Blvd., Los Angeles 28.
- LIBRARY: Library Films, Inc., 25 W. 45th St., New York City 29.
- LINTON: Linton Bros. & Co., Fitchburg, Mass.
- LUDLOW: Ludlow Typograph Co., 2032 N. Clybourn St., Chicago, Ill.
- McGraw: McGraw-Hill Book Co., Text Film Dept., 330 W. 42nd St., New York City 18.
- MERGENTHALER: Mergenthaler Linotype Co., Brooklyn 5, N. Y.
- MIEHLE: Miehle Printing Press & Mfg. Co., Sales Dept., 2011 W. Hastings St., Chicago, Ill.
- MILLER: Miller Printing Machinery Co., 1101 Reedsdale St., Pittsburgh 33.
- MODERN: Modern Talking Picture Service, Inc., 45 Rockefeller Plaza, New York City 20. See Red Book for branch offices in Atlanta, Boston, Buffalo, Cedar Rapids, Charlotte, Chicago, Cincinnati, Cleveland, Dallas, Denver, Detroit, Harrisburg, Indianapolis, Kansas City, Los Angeles, Milwaukee, Minneapolis, New Orleans, Oakland, Omaha, Philadelphia, Pittsburgh, St. Louis, Seattle, Washington, D.C.
- MONSEN: Monsen-Chicago, Inc., 22 E. Illinois St., Chicago, Ill.
- NAT'L BIBLE: National Bible Press, Film Loan Library, 239-245 So. Market St., Philadelphia 5, Pa.
- NEKOOSA-EDWARDS: Nekoosa-Edwards Paper Co., T. J. Meyer, Advertising Dept., Port Edwards, Wis.
- N. Y. NEWS: New York Daily News, New York City.
- RAPID ELECTRO: Rapid Electrotape Co., McMicken Ave. at Race, Cincinnati, Ohio.
- RFA: Religious Film Association, Inc., 297 Fourth Ave., New York City 10.
- SCANDIA: Scandia Films, 220 W. 42nd St., New York 18.
- SINCLAIR-VALENTINE: Sinclair & Valentine Co., 611 W. 129th St., New York City 27.
- SVE: Society for Visual Education, Inc., 1345 W. Diversey St., Chicago.
- STILLFILM: Stillfilm, Inc., 8443 Melrose Ave., Hollywood 46, Cal.
- TFC: Teaching Film Custodians, Inc., 25 W. 43rd St., New York 18.
- VIS SCI: Visual Sciences, Suffern, N. Y.
- VOCA GUIDANCE: Address Carl F. Mahnke Productions, Vocational Guidance Films, Inc., 2708 Beaver Ave., Des Moines 10, Iowa.
- WESTERN: Western Printing and Lithographing Co., Charles A. Conrad, Personnel and Training Dept., 1220 Mound Ave., Racine, Wis.
- WESTERN RESERVE: Western Reserve University, Audio-Visual Dept., Cleveland, Ohio.
- WOLFF: Raphael G. Wolff, Inc., 1714 N. Wilton Pl., Hollywood 28, Calif.

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THE CLASS PRESENTS

STUDENT PARTICIPATION TECHNIQUE UTILIZING NEW SPONSORED FILMSTRIPS
ON BASIC ECONOMICS PROVES HIGHLY EFFECTIVE IN FIRST CLASSROOM TEST

by Dora Mary Macdonald

Public Relations, Board of Education, Duluth, Minnesota

SOMETHING NEW has been added—a different technique for showing filmstrips.

Two filmstrips in full color for classroom use insure close attention from pupils, because the children participate in the showing of the film. In the first place, each filmstrip is accompanied by copies of a printed dialogue, which two youngsters read aloud as the strip is shown,—

an informal dialogue in the style and speech of fifth or sixth graders.

In the filmstrip *Specialization*, one of the first titles reads, "The voice parts of Jack and Jane will be read by a boy and girl from your class." Members of the class sit in awed expectancy as they identify themselves with the protagonists. "Jeepers, this is *ours*!" is their attitude.

The next photograph shows Jack and Jane at a table, where Jack is showing Jane, his sister, a picture. As the class sees the picture of an early Egyptian baking bread, the following dialogue is read aloud:

Jack: Here's a picture that shows how Egyptians 4000 years ago baked bread.

Jane: How funny! The oven is outdoors.

Jack: Like our barbecue—almost.

Jane: I wonder what it would have been like to live 4000 years ago.

Another frame of the filmstrip shows early milling of grain. The dialogue follows:

Jack: Here's a picture of an Egyptian grinding wheat into flour.

Jane: Just looking at that picture makes my back ache.

Jack: The work probably made *his* back ache.

Farther along in the filmstrip is a picture of a carpenter building a house. The following dialogue ensues:

Jane: Here's a picture of the carpenter who worked on our house. Wouldn't it have been odd if Dad had done all that work?

Jack: It would have been too bad for all of us, because Dad can't drive a nail in straight. It takes a skilled carpenter to build a house.

Jane: But it takes a skilled mechanic like Dad to fix an automobile. Everybody seems to do some work that helps others these days.

Class Participates in Quiz Questions

Throughout the showing of the filmstrip, the readers carry on the script narrative. The teacher does not need to interrupt to make explanations, reminding the class that this is an educational film shown in school. She can allow the youngsters to live the story with Jack and Jane.

Another technique is introduced, as the entire class has opportunities to participate in the project, activity, or whatever you call the showing of a filmstrip. For instance, after one portion of the strip, which shows different workers at their specialized jobs in producing clothing, a title is flashed on the screen: "What other workers not mentioned by Jack and Jane supply our clothing?" There follows a brief class discussion which generally brings out such workers as transportation men, sellers of thread, dyers, and makers of trimmings. The discussion points up the thought conveyed by the pictures. Knowing they will have a part in the discussion, pupils watch the filmstrip with avid interest, instead of merely "looking at a show."

Several teachers have given their fifth graders entire responsibility for producing this filmstrip program. The

youngsters chose their own readers, and set up and operated the projector. In one school, the project was such a success in the classroom that it was repeated for other classes.

Both Duluth and Des Moines Schools Aided

The filmstrip *Specialization*, made under the direction of Dr. Paul Wendt, director of audio-visual education, and Dr. Ray Price, professor of education, both of the University of Minnesota, was produced by General Mills, Inc., of Minneapolis, Minnesota. Emphasizing the fact that specialization in work results in greater productivity, it is one of the visual aids offered in a unit on basic economic concepts for elementary schools. The unit is titled *Working Today*. The filmstrip and the dialogue, as well as the unit itself were worked out with teachers in the public schools of Duluth, Minnesota, and completed after much research, discussion and experimentation in the Duluth and other Minnesota schools. That was in 1943. This year, another filmstrip, *We Depend Upon Each Other*, also in color, was produced by General Mills with the cooperation of teachers in the public schools of Des Moines, Iowa. This filmstrip shows how the family, town, country and world are links in the economic chain, each depending upon the other. It uses the same techniques used in *Specialization*.

Another visual aid to this study of economic concepts is a series of nine large art panels in color, each one showing a step in the story of bread. For comparisons to depict man's progress, three periods are shown in each panel: the early Egyptian, 19th century in America, and modern times. The first panel shows the physical environment for each period, while the others illustrate progress in preparing the ground for planting, harvesting, threshing, storing grain, marketing, milling and baking.

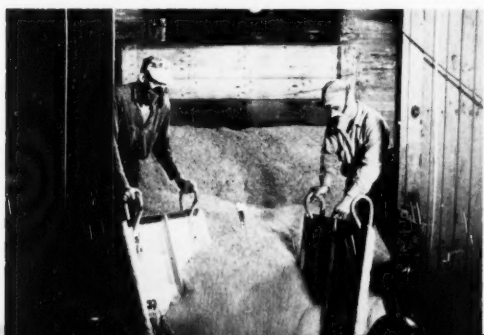
657 Fifth-Graders Tested on Value of Aids

To evaluate the effectiveness of the panels and filmstrips as teaching aids, Merle Guthrie, graduate student at the University of Minnesota, made a pre-test and final test of 657 pupils in 29 fifth grade classes in Duluth and Austin, Minnesota schools. These tests were designed only to determine the value of the visual aids, not to test pupils on specific facts presented in panels and filmstrip.

Since no attempt was made to control the teacher-learning situation except as to the visual aids, there is no check on the amount of time spent on the unit between tests or the thoroughness of the teaching. Neither was any attempt made to equate the pupils on any basis, such as intelligence or socio-economic status.

The pre-test, consisting of 25 true-false statements and

THE FILMSTRIP "SPECIALIZATION" shows that specialization in work results in greater productivity. It was the first of the new General Mills filmstrip series titled "Working Today," a unit on basic economic concepts. The second in the series is "We Depend Upon Each Other" and is now available for elementary use.



DES MOINES, IOWA SIXTH-GRADERS demonstrate the filmstrip technique shown in "We Depend Upon Each Other." Donal Crouch is the pupil projectionist; Carolyn Orr and Frank Easter (foreground with flashlights) read the dialogue during the showing as business men and teachers look on at Sabin School.





How to Obtain the Filmstrips

♦ Charming Linda Glisan (above) of the Cavell School in Minneapolis was featured in one of the General Mills' filmstrips. For further information on availability of these materials for your school write to Tom Hope, Film Department, General Mills, Minneapolis, Minnesota.

25 multiple-choice questions, was administered during October and November, 1949, before the unit on economics was introduced to the children. After the study, a final test, consisting of the same material but with different questions, was given during February and March, 1950. To eliminate the testing of reading abilities, the questions were read to the classes. The same two persons administered the tests in order to maintain consistency and control over the testing situation.

Data Shows Filmstrips Are Valuable Aids

"The data collected from the testing situation are sufficient for us to conclude that the panels and the filmstrip are valuable teaching aids for the introduction and the development of basic economic concepts in the elementary schools," says Mr. Guthrie.

To the average teacher, concerned with the business of "training for citizenship," the entire unit is an aid in helping children to understand one of the biggest factors that has given the United States the highest standard of living in the world—the economic system. Considering the number of drop-outs before high school, it is vital that such concepts of economics be presented in the elementary grades, if all young Americans are to acquire an intelligent appreciation for their country.

Teachers Use Different Combinations

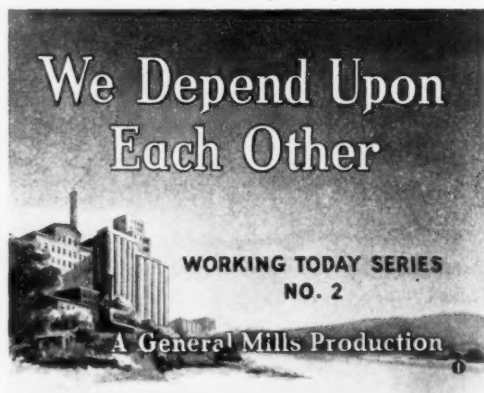
In presenting the unit between tests, six teachers used the filmstrip *Specialization* only, seven teachers used the panels only, and 16 teachers used both visual aids. The whole testing program was on a voluntary basis for teachers, most of whom preferred to use both panels and filmstrip in a study of the unit.

Here are the results of the testing: (See chart.)

Here Are Results of Fifth-Grade Tests at Duluth and Austin (Minn.) Schools

VISUAL AIDS USED	NUMBER OF PUPILS	PRE-TEST		FINAL TEST		GAIN
		RANGE	MEDIAN	RANGE	MEDIAN	
Panels only	162	23 to 45	34.5	27 to 49	39.9	5.4
Filmstrip only	136	24 to 42	33.8	29 to 48	41.1	7.3
Both aids	359	20 to 45	34.3	25 to 50	42.4	8.1

Opening title frame of the second
General Mills filmstrip.



This typical family appears in
"We Depend Upon Each Other."



The County Film Library

NATIONWIDE SURVEY OFFERS SOLUTIONS TO PROBLEMS ENCOUNTERED IN THE ORGANIZATION AND OPERATION OF A COUNTY FILM LIBRARY

by Lloyd J. Cartwright

Saginaw County, Michigan, Audio-Visual Education Center

IN LATE SUMMER of 1949, using a mailing list provided by the U. S. Office of Education, letters were sent to the chief state school officers in each of the forty-eight states requesting information about the location of any county or area cooperative audio-visual programs. Forty-four replies were obtained, eighteen of which indicated that no such projects were in operation.

Letters were also sent to the sales representatives of two of the nation's largest producers and distributors of educational films and to audio-visual departments of some of the leading college and university educational film libraries.

From the replies from the above, a mailing list was compiled of the eighty-two reported projects and a questionnaire was sent to them. Replies were obtained from forty of these, including the writer's county. Of these, twenty seemed to fall within the classification involved in this study with eighteen being complete enough to be of value.

Covers Eighteen Projects in Twelve States

Questionnaires used in this survey came from Kern, Los Angeles, Sacramento, San Bernardino and Ventura Counties in California; Dade County, Florida; Monmouth County, Illinois; Polk County, Iowa; Jefferson County, Kentucky; Cumberland County, Maryland; Saginaw County, Michigan; St. Louis County, Missouri; Montgomery County, Maryland; Mecklinburg County, North Carolina; Beckham and Tillman Counties, Oklahoma; Erie and York Counties, Pennsylvania; and Everett County, Washington.

The eighteen projects are distributed over twelve states, with representation in all of the major regions of the country. California, where the most extensive work of this sort is being done, sent reports on five projects. The number of teachers involved ranges from 150 in Monmouth County, Illinois to 7,222 in Los Angeles, California. The student enrollment was 3,500 and 149,570 respectively. Half of the projects served over 800 teachers each while three served fewer than 200.

Nearly Half of Schools Rural or Suburban

Most of the counties contain at least one city, yet nearly half of the schools are rural, village or suburban. No data is available to indicate the number of pupils or teachers in each classification. Nearly one third are city elementary schools. All serve primarily the public schools of the area with service to allied programs connected with the schools such as veterans' institutes, adult edu-

cation, etc. Five also serve private and parochial schools, operating on a contract, rental or cost sharing basis.

Table I: Number of Schools

SCHOOLS SERVED	NUMBER OF UNITS
City Elementary schools.....	395
City Junior High schools.....	44
City Senior High schools.....	87
Village or suburban schools.....	554
Rural districts.....	203
Junior College.....	6
Other.....	65

Determining the administrative organization for the county audio-visual program. Most of the county audio-visual programs in the country operate through the administrative offices of a city or county board of education. This has been most successful in California where county school organizations prevail. Only four of the eighteen programs studied in this survey operate as co-operatives under a committee of teachers or administrators representing the schools being served. The administrative board or committee of these cooperatives may turn certain functions such as purchasing supplies, providing the housing, employing and supervising the staff, and accounting for the funds, over to one of the larger schools.

Further Analysis of Administrative Steps

It would seem that the most effective organization could be set up under the county superintendent if all schools are under his administration.

Where several school districts cooperate to provide audio-visual services it would seem wise to administer the program under one of the larger districts. Provision should be made for sharing the planning and the cost as well as the services.

The place of the audio-visual program in the school organization. Only three projects studied in this survey are part of a teaching materials center. One is a service combined with a bookmobile library, another a part of the school library, while one has a long history as a department in a city museum. Additional specialized staff is provided in each case.

The selection and employment of the staff for operating the audio-visual program. The five smallest programs surveyed have no staff members other than the direc-

COUNTY FILM LIBRARIES A Nationwide Survey

STATES	NO. OF COUNTIES	COUNTY FILM LIBRARIES	COOP. FILM LIBRARIES
Alabama	67	7	2
Arizona	14	0	7
Arkansas	75	22 (in 14 counties)	
California	58	53	0
Colorado	63	1	0
Connecticut	8	0	0
Delaware	3	0	0
Florida	67	16	0
Georgia	159	17	0
Idaho	22	0	0
Illinois	102	13	0
Indiana	92	13	0
Iowa	99	3	0
Kansas	101	2	0
Kentucky	120	7	0
Louisiana	64	10	0
Maine	No county school system		
Maryland	23	13	0
Massachusetts	Town system of school supervision		
Michigan	83	3	0
Mississippi	82	0	3
Minnesota	86	1	0
Missouri	114	2	5
Montana	56	0	0
Nebraska	93	0	0
Nevada	16	0	0
New Hampshire	10 (state divided into 43 school units)		
New Jersey	21	2	2
New Mexico	31	0	5
New York	57	2	6
North Carolina	100	36	0
North Dakota	53	0	0
Ohio	88	2	0
Oklahoma	77	41	0
Oregon	36	4	0
Pennsylvania	66	4	4
Rhode Island	5 (town unit system)		
South Carolina	46	0	0
South Dakota	67	0	0
Tennessee	95	31	0
Texas	254	21	6
Utah	(by districts)		
Vermont	13	0	0
Virginia	(123 school divisions)		
Washington	39	10	0
West Virginia	55	15	0
Wisconsin	72	0	0
Wyoming	23	0	0
TOTAL NUMBER	3,050	413	43

tor, staff work being done by the director and members of the staff of other departments, usually the county superintendent's office. Others have one to four full time staff members except the largest, which has twenty-two. Part-time workers are employed in addition, while one is run entirely by a staff of students under a part-time director.

Six audio-visual programs have been operating two years or less while only nine are more than four years old. One has been part of a city museum for thirty years. Only two directors have been in their present position over seven years. All directors but three had more experience as classroom teachers than as administrators, with ten of them having spent more than ten years in the classroom working directly with the students. Only two do not hold teachers' certificates, and these two are librarians.

TABLE II
Number of Full and Part-Time Employees in
The County Audio-Visual Programs Reporting

COUNTY	PROGRAM NO. OF TEACHERS	OTHER STAFF MEMBERS			
		DIRECTOR FULL TIME	PART TIME	FULL TIME	PART TIME
1	7222	x		22	4
2	2100	x		2	1
3	2000	x		4	4
4	1512	x		4	
5	1200	x		1	4
6	906	x		1	
7	900	x		1	1
8	850	x		2	1
9	800	x			
10	800	x		1	
11	585	Museum director (1)		3	2
12	567		x		1
13	476	x		3	2
14	400		x (2)		
15	300		x (3)		
16	180		x (4)		1
17	165	x			1
18	150		x (4)		

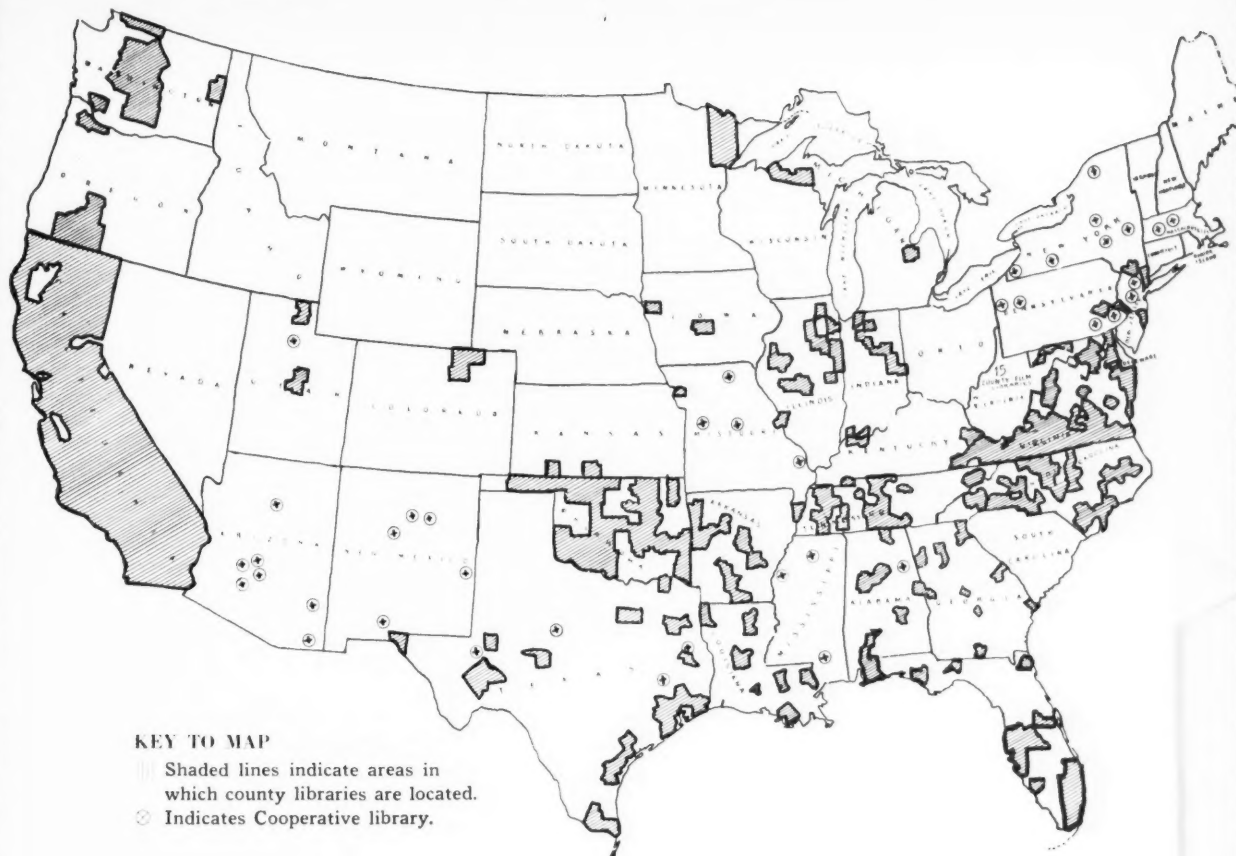
(1) Museum director (2) Building Principal
(3) Bookmobile (4) County Superintendent

The Principal Is a Key Figure

Implementing the effective utilization of audio-visual materials. We have noted that this problem should be the concern of the principal and that a teacher might be selected to assist in this work. In many instances the principal is the bottleneck. If he definitely opposes the use of audio-visual materials few, if any, teachers will be enthusiastic users. Elementary and secondary school principals have definite three-fold responsibility in the audio-visual program involving the collection of instructional materials, their organization and their use. Many of the items will be owned by and stored in the school. Many others will be available on circulation from the center and the principal must be responsible for efficient and effective utilization of audio-visual material in the classrooms of his building.

Duties and Qualifications of Coordinators

To perform the functions of effective utilization, the principal may select carefully a staff member to serve



as coordinator within the school. The appointee should be one who is an excellent teacher, a skilled and enthusiastic user of the newer materials, and a respected colleague of his fellow teachers. The coordinator should be released from sufficient other duties to allow him an opportunity to serve his school. In large schools the coordinator may devote full time to the program while in the smallest it may mean only exemption from the usual extra-curricular staff assignments.

Students Can Greatly Facilitate Program

Organizing the student service program. There seems to be no standard of practice for student service in county audio-visual programs as now operated. In one school cooperative, all booking and other clerical work is done by students working in relays under a teacher-director.

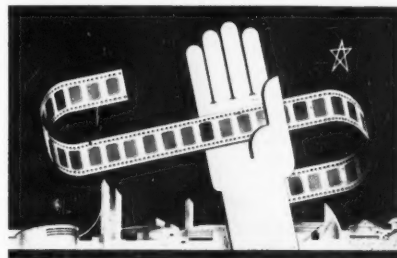
The extent to which students operate equipment varies from "very little" to "extensive." The wording of survey reports indicates that students operate equipment to a considerable extent in most schools. Some schools place a lower grade or age limit for participation. One indicated from fifth grade up. A few limit the service group to junior or senior high school students.

It would seem that a student service program applied to the use of audio-visual materials and equipment in the classroom will improve utilization as well as give

students some practical experience in the use of equipment, in keeping records, and in planning for study.

Figures on Materials in Circulation

Determining what materials to circulate and the quantity to be made available. Educational motion pictures owned in county audio-visual centers range from 50 prints to 4,355 with a median of 308 and an average of 699 prints for each project. This number of prints would be 596 per teacher, on the average. Filmstrips were also owned in numbers ranging from 125 to 1,243. Several county programs reported that the filmstrips were being placed in the individual schools in a decentralization program concerning the less costly items. Transcriptions and



recordings were reported in all but two libraries. Most projects circulated a few slide sets in the two standard sizes; four projects have dioramas for loan; nine projects maintain a file of flat pictures, while a few maps, charts, silent films and exhibits were reported.

TABLE III
Number of Sixteen Millimeter Films, Filmstrips, Transcriptions and Recordings Circulated by County Audio-Visual Centers in the United States

COUNTY NO.	NO. OF TEACHERS	SIXTEEN MILLIMETER MOTION PICTURES	MOTION PICTURES PER TEACHER	FILM-STRIPS	FILM STRIPS PER TEACHER	TRANSCRIPTIONS AND RECORDINGS
1	7222	4355	.603	311	.043	978
2	2100	850	.405	1000	.285	1000
3	2000	1671	.835	1277	.638	907
4	1512	1450	.959	900	.595	...
5	1200	375	.312	400	.333	100
6	906	582	.642	1243	1.371	75
7	900	242	.269	324	.360	32
8	850	700	.823	400	.470	300
9	800	150	.187	1000	1.250	150
10	800	200	.250	500	.625	100
11	585	209	.357	729	.124	343
12	567	120	.211	...	...	...
13	476	603	1.266	504	1.059	1000
14	400	600	1.500	300	.750	100
15	300	70	.233	600	2.000	75
16	180	188	1.044	307	.170	36
17	165	119	.721	100	.606	...
18	150	103	.686	620	4.133	50

Seven projects report that they rent some films for school use but that this is a very small part of the program and individual schools are usually expected to finance their own rentals. All but two counties use sponsored films, varying from six to over two hundred titles, some on long-term loan. Only four exchange their films with other libraries. It appears that county audio-visual centers are primarily concerned with the materials owned for circulation and carry on no extensive rental program. Very few programs provide for renting films or other material. Those who do rent, obtain only a few special purpose films. Some of the larger individual schools do rent extensively. *In fact, the availability of films from a local center acts as a stimulus to the renting of educational films.* Criteria for determining what to rent and what to buy is no problem for most county projects.

Place Less Costly Items in Schools

On the basis of current practice it would seem that the materials to be made available from a county audio-visual center be selected from the several types available, such as motion pictures, filmstrips, recordings, flat pictures, charts and exhibits. The service should not be confined to a single type. *Decentralization of the less costly items should be encouraged.* In other words, filmstrips and the often used recordings and flat pictures should be available in the schools while motion pictures and less often used special subject items should be circulated. When schools determine, from use of the circulated material, which items will be used again and again,

they will want to purchase their own so they can have them as needed.

Evaluating and selecting audio-visual materials for the county program. Teacher committees are universally used for the purpose of appraising and selecting materials for purchase. Materials to be considered are obtained for preview and records are made of the evaluation. Only items strongly recommended are purchased. In one project it has been found advantageous to retain some of the same people on the evaluation committees for as many as nine years to take advantage of their training and experience in this crucial task.

Make It Easy for Teachers to Order

Providing for circulation and delivery of materials from the county audio-visual center. Eleven of the eighteen county audio-visual projects in this national survey make at least part of their delivery by school truck, making the trip from one to ten times per week. The most common number of trips per week was two or five. Fourteen projects reported using parcel post in some volume, many times to supplement the truck delivery. In some projects the school makes a postage deposit against which shipments are charged. Users often pick up films at the film library. In one place, users other than the public schools pick up their films since the truck delivery is a public school project.

It is recommended that procedures be set up to make obtaining the audio-visual materials easy on the part of the teacher. First a catalog might be prepared and placed in the hands of each teacher. This catalog should give a good summary of the content of each item and be arranged for easy reference. Second, provide simple order forms and set up a booking calendar for each item in a visible file so that reservations may be quickly and easily made. Third, provide for parcel post delivery to all outlying schools. In heavily populated areas daily

TABLE IV
Number of Teachers Who Share the Various Kinds of Audio-Visual Equipment in the Schools

COUNTY NO.	NO. OF TEACHERS	NO. OF TEACHERS FOR EACH UNIT OF EQUIPMENT					
		MOTION PICTURE PROJECTOR	PER FILMSTRIP PROJECTOR	PER RECORD PLAYER	PER TRAN- SCRIPTION PLAYER	PER OPAQUE PROJECTOR	
1	2100	21	70	7	70	175	
2	2000	23	24	21	34	142	
3	1512	16	27	..	..	151
4	1200	17	18	12	60	240	
5	900	11	8	17	54	60	
6	850	19	21	8	61	122	
7	800	13	11	5	40	40	
8	800	13	11	16	47	32	
9	567	35	18	8	94	189	
10	400	14	33	11	200	66	
11	300	30	13	5	100	60	
12	180	12	9	18	..	36	
13	165	12	21	..	..	..
14	150	12	7.5	7.5	150	75	
Average number of							
Teachers per unit		17	18	11	63	92	
Totals		11,924	689	647	1049	188	129

truck service may prove more efficient and less costly than parcel post.

Most Schools Have Their Own Projectors

The need for equipment. In only a few of the smaller projects in this survey are projectors and other equipment circulated, because most of the schools have units of their own. Some have "loaner" units for use while a school unit is being serviced.

The number of teachers who must share equipment varies and has little relation to the size of the project. On the average there is one motion picture projector for every seventeen teachers and one filmstrip projector for eighteen teachers. Eleven teachers share each record player, while sixty-three teachers share a transcription player and each opaque projector must serve ninety-two.

A few larger schools in the group reporting have 4 or 5 motion picture projectors and at least one filmstrip projector. Those reporting their inventory on equipment on these items are shown in Table IV (left).

Budgets Range From \$1200 to \$96,558

Financing the county audio-visual program. Our survey revealed that the amounts spent on operating the programs vary greatly. Methods for reporting costs vary so that accurate comparisons could not be made. The methods for determining operating costs, and the costs as reported, also vary.

There is great diversity in the way budgets are set up, in the sources of funds, and in the accounting methods. Thirteen counties reported operating on a *per pupil cost basis which varied from \$.25 to \$1.00 per pupil*. The average per pupil cost was \$.65. Some projects use a sliding scale with larger schools paying a lower rate. Only one project reports cost on a per teacher basis. Two counties make use of money from pupil or P.T.A. projects. Six report that their funds are provided by the county board of education's budget. Over half of the programs do not include staff salaries in their operating

budgets as staff members may also serve as county superintendents, assistants, or have the major portion of their time assigned to other duties. The budgets range from \$1200 to \$96,558.

TABLE VI

Budget Allocations for Audio-Visual Materials and Equipment in County Programs in the U. S.

COUNTY NUMBER	NO. OF TEACHERS	MOTION PICTURES	FILM-STRIPS	OTHER ITEMS	EQUIPMENT*
1	7222	\$63,000	\$	\$7,000	\$ 2,500
2	2100	19,000	650	3,000	16,870
3	2000	26,050	1,000	550	3,050
4	1512	10,000	1,500	500	....
5	1200	6,000	1,200	1,200	....
6	906	6,000	2,500	50	900
7	900	13,800	1,000	50	1,500
8	850	7,000	400	500	....
9	800	....	....	....	....
10	800	5,000	1,000	500	....
11	585	....	....	....	....
12	567	750	350	350	4,800
13	476	12,000	500	1,500	505
14	400	25,000	1,500	1,000	10,000
15	300	1,000	750	500	500
16	180	7,500	800	100	800
17	165	8,695	100	....	750
18	150	1,215	400	50	450

*From the questionnaires returned, this item seems to be for central office use or for circulation and demonstration.

Since most of these projects are relatively new, substantial amounts are being put into equipment and into circulation materials such as motion pictures, filmstrips, and the like. The amounts for circulation materials ranged from \$1,950 to \$100,000 with only eight projects allocating less than \$11,000. The largest amounts are being spent for 16mm motion picture films. Filmstrips were provided at a cost of about one-thirteenth of the value of motion pictures. One predominantly rural county spent slightly more for filmstrips than for motion pictures. Transcriptions and other aids also claimed significant proportions of the budgets. Four spent \$10,000 or more for equipment. Since nine of these projects have been operating less than five years, expansion is still rapid.

Note Limitations on County Services

♦ *Providing in-service training for teachers.* The training in this survey lend materials to member schools only. One center lends to P.T.A. and "service groups" only when ordered through the schools. Another classifies its films as restricted or unrestricted, lending only the unrestricted ones to others in the community. These may be taken out only over-night, but schools have priority in making reservations. Several others make loans to the recreation departments, civic groups and "organized" groups when the materials are not being used in the schools. One project rents its materials and equipment to other groups while another will lend a projector for a fee which is paid to the operator who is provided by the center.

Methods of Improving Teacher Training

♦ *Providing in-service training for teachers.* The training program in the county units studied is as varied as the

TABLE V

Annual Per Pupil Cost of Operating County Audio-Visual Programs in the United States

COUNTY NUMBER	NUMBER OF TEACHERS	ANNUAL COST PER PUPIL
1	7222	.50
2	2100	.10-.50
3	2000	sliding scale
4	1512	.75
5	1200	.60
6	906	..
7	900	.40
8	850	.30 cl.-.50 sec.
9	800	..
10	800	.30
11	585	..
12	567	..
13	476	1.00
14	400	1.00
15	300	.50
16	180	.25
17	165	.75
18	150	..

audio-visual program itself. The first problem in training seems to be in the creation of facility in the use and care of equipment. The most popular type of organizational provision is the college or university extension class and the workshop, particularly at the opening of the school year. Faculty meetings, regular coordinators' meetings and visits by the director or other staff member to the classroom are all exploited in the programs.

♦ *Determining what insurance protection should be provided for the center's material and equipment.* Of the county audio-visual projects reporting in this survey "Marine" all hazard insurance protection is provided for the audio-visual materials in seven projects. Four other projects carry fire insurance only. One county absorbs losses in the regular budget so that it is, in effect, a group sharing plan. Eight projects carry no insurance at all.

♦ *Helpful practices.* There were many helpful practices reported. Among the practices mentioned were: the provision of an excellent film catalog; the reduction of red-tape in ordering materials; the establishment of committees of teachers to select the films to purchase; the use of student operators; a regular bulletin or newsletter to all teachers; monthly committee meetings; and holding workshops and demonstrations.

♦ *Some of the most difficult problems found in organizing and administering a county audio-visual program.* The most frequently mentioned problem is the perennial one of adequate finances. Money is needed for an adequate program. One factor related to the solution of this problem is the matter of good public relations, i.e., making the people of the community aware of the values of the program; overcoming the idea that educational motion pictures are not frills but that films actually implement the educational program. The need for a sympathetic and informed administration lies in the same category. Another major problem involves proper utilization of films by the teachers. This difficulty was indicated as a matter of training that must be overcome for the most part in the inservice program.

A few other problems mentioned on survey sheets were: providing an adequate system for assessing the needs of the curriculum in choosing materials; getting loaned materials returned on time; setting up a defense against the demand by outsiders for use of school films; getting materials to users; preventing film damage; allowing free time for building coordinators; and overcoming the need for ordering a long time in advance.

Summary of Recommendations for the Organization and Administration of an Audio-Visual Program on a County Basis

★ To those planning the inauguration of an audio-visual program on the county level it is recommended that

1. The geographical unit be large enough to provide potentially constant use of the more basic items.

2. The geographical unit be small enough to provide for quick and easy communications between the schools and the center.

3. Wherever possible, the administration be under a single school organization such as a county or city board

of education with other school units contributing their share of costs and professional planning.

4. Wherever possible, the program be set up as a part of an institutional materials center charged with the administration of the many types of teaching materials used in the schools.

5. An adequate staff be provided to perform the administrative planning, central office clerical work, and distribution.

6. Building coordinators be allotted sufficient time to perform their duties in helping their colleagues to do a better job of teaching through the better utilization of audio-visual materials.

7. School administrators provide every possible convenience to the easy and efficient use of teaching aids. Among these are: window darkening shades or drapes in every classroom; a sufficient number of projectors and other equipment so that such equipment will be available when needed; wheeled carts for easy transport of heavy equipment from room to room.

8. Pupil audio-visual service groups from sixth grade up be trained to assist the teachers in setting up and using equipment and routing a-v materials.

9. Pupils should not be used as messengers between the school and the center because of hazards to safety.

10. The audio-visual center provide for circulation of selected materials from the several types available. The major investment should be made in 16 mm motion picture films while filmstrips, recordings, flat pictures, charts and exhibits should be provided primarily on a demonstration basis. Schools will want to buy many of these less costly items to keep in their buildings to use as needed.

11. Provision be made for getting materials into the classroom with the least possible effort on the part of the teacher. To do this, the center should provide a good catalog, simple order forms and deliver the material to the school.

12. Equipment be provided in the school buildings in sufficient quantity to assure teachers of having projectors or other devices to use when needed. The minimum amount of equipment is recommended to be:

- a. One sixteen mm motion picture projector for every ten teachers or one for each building.
- b. One combined filmstrip and two by two inch slide projector for every ten teachers, or one per building.
- c. One two- or three-speed single play portable record player for every ten teachers or one per building.
- d. One opaque projector for each school.

13. Adequate funds to operate the audio-visual program be provided in the budget of the board of education. Gifts and rummage sales should not be made the source of income for the continued support of the project.

14. A policy be adopted which will allow responsible community organizations to use the materials on a basis which does not interfere with school use.

15. A continuing in-service training program for teachers be set up to include demonstrations, extension classes, faculty work shops, and committee projects. A regular newsletter or bulletin may be distributed to teachers telling about new items and reporting some of the successful projects in the schools.

16. Ordinary fire insurance be carried on materials and equipment stored at the center, and schools to be responsible for materials while in the school. •



One day Brush was big enough to leave the den.

"Brush, the Squirrel" is in the "Animal Stories" films.



Blackie learned to fish. Soot rolled in the wild flowers.

... another color filmstrip features "Lazy Bear Cub"

Our Visits With Animals*

by Elona Kwapil, Teacher

★ The filmstrips *Animal Stories* by The Jam Handy Organization are excellent for grades one through three. The pictures and color are very good, and the stories are stimulating, informative, and a challenge to reading ability.

Because these are such outstanding filmstrips for young children, I wish to report my experiences.

I carefully previewed each filmstrip and then "wrote-up" study plans for their use in my classes.

Because I know other teachers will value the use of these "animal" filmstrips I am happy to report my study plans:

THE ADVENTURES OF PETE AND HIS DOG

What the Filmstrip Shows: Terry was a real dog, and this is a true story of the big puppy that came to live with Peter. He wagged his tail when he was happy and knocked over a table and vase. Pete took good care of Terry and gave him milk, puppy biscuits, fresh water, and bones to chew. Poor puppy tried to be good, but he always got in trouble; one day he even chewed up Mother's shoes.

One spring day, the boy and his dog went to the river and found a bird's nest and a frog. Terry took a drink of water from the river. Pete reached over the bank to take a drink, too. Plop, he fell in and went down to the bottom—with the fishes and seaweed—the dog jumped in after him and pulled him on shore, then barked for help. Father came and emptied the water out of Pete just in time, and Mother forgot how cross she was over the puppy's mistakes. Our Terry is a hero and everybody loves him. Here is the order of presentation:

1. Talk about our pets and how to care for them.
2. Look at a film of a boy and his dog. Watch for such things as these: a. Is Terry a good pet?

- b. What kind of a dog is he? c. Does Pete take good care of him? Do Mother and Father like the puppy? e. Are Pete and his puppy good friends?

3. View Filmstrips.

4. *Follow-Up Activities:* a. Children's conversation. b. Art work. c. Related reading. d. Rhythms. e. Songs about dogs.

HOPPY, THE RABBIT

What the Filmstrip Shows: Hoppy was a real rabbit and Hoot was a real cat. One Easter morning there was a funny box by Ann's bed. Inside was a black and white rabbit, and out he hopped. Hoppity hop. "I'll call him Hoppy," said Ann. She got a big wire cage for him and set it out in the yard. She fed him fresh water, bread, lettuce, carrots, and rabbit food in pellets. Ann made a bed for Hoppy of fresh straw. One day, Hoppy tried to eat the cat's tail hanging from a wheelbarrow. Hoot boxed his ears. What cat likes to have his tail nipped? Then one day as Hoppy was eating clover in the yard a dog came after him. Hoot saw him coming and came to the rescue—he jumped on the dog's head and scared him away. Hoppy is a lucky rabbit to have such a brave friend.

Here is our presentation:

1. Read the story of Peter Rabbit.
2. Discuss such ideas as these: a. How did the cat help the rabbit? b. Were they friends when they first met? Why? c. Did you ever hear of a cat and a rabbit being good friends?
3. View Filmstrip.
4. *Follow-Up Activities:* 1. Discuss the filmstrip. 2. Draw a picture of a Hoppy Rabbit. He has long ears and a powder puff tail. When you have finished, turn your paper over and make a picture of black Hoot. Remember that cats have small ears and a long tail. 3. Learn to sing songs about rabbits and cats. 4. Rhythm activities.

(OVER)

*The complete series of *Animal Stories* filmstrips in authentic colors is available from The Jam Handy Organization, 2821 E. Grand Boulevard, Detroit 11, Michigan. Write for illustrated literature on this and other JHO materials.

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CANADA

Audio-Visual Supply Company, Toronto General Trusts Building, Winnipeg, Man.

Our Visits With Animals:

(CONTINUED FROM THE PRECEDING PAGE)

MRS. CACKLES BECOMES A GOOD CITIZEN

What the Filmstrip Shows: Mrs. Cackles, a hen, doesn't know how to get along with others. She goes to a farm to live with other chickens, and behaves so badly that she gets "plucked," and has to stay in the hen house all winter until she grows new feathers. When she returns to her own yard and owner, she is a "lady." She learned a hard lesson and is now kind and thoughtful. Here are our followup activities:

Can you make a story about this film? a. Mrs. Cackles is a good citizen now. b. She takes turns being the leader. c. She is kind to barnyard friends. d. Can you say this poem with me? *Higgledy Piggledy, my black hen, etc.*

BRUSH THE RED SQUIRREL

What the Filmstrip Shows: Brush the Red Squirrel is the story of a red squirrel born in a beech tree. When he was little he slept quietly with his sisters. As he grew, he became noisy and mischievous, teased his sisters and ripped their tails when they were nursing. He screamed when his mother washed his face and was generally naughty. When he was big enough to leave the nest, Brush's mother took him to gather nuts. Again he was naughty. He bothered the robin's nest and Mother Robin nipped his ear. Brush was frightened and lost his balance and fell to the ground—down, down, down. Mother squirrel comforted him and licked his bruises and he learned to mind her and gather beechnuts properly.

1. What story can we make about Brush? a. Brush was playful and teased everybody. b. Sometimes he was naughty. c. He frightened the robins. d. Squirrels like nuts. e. Mother birds nip at squirrels' ears. f. Squirrels balance their bodies with their bushy tails. g. Mother loved Brush even when he was naughty.
2. Can we draw some squirrels with big bushy tails?

THE LAZY BEAR CUB

What the Filmstrip Shows: The Lazy Bear Cub is too lazy to find his food when his mother no longer has milk for him. He falls asleep and floats away on a log. When he wakes he is lost and hungry—a dog chases him up a tree before his mother comes looking for him. Mother chases the dog and rescues her baby. Lazy Bear is so happy to be back with his mother that he obeys her and seeks berries and food offered in the native woods if he just looks for it.

RINGS THE RACCOON

What the Filmstrip Shows: Rings the Raccoon tells us how raccoons live, what they eat, how they feed and protect their young. The winter sleep over, the Raccoon hunted nuts under the snow. When warm weather came, four babies came to Rings. Little babies with no fur and eyes closed. Rings kept her babies clean with her tongue. Soon they grew and went out at night hunting food with their mother. When a boy discovered the Raccoon family, they looked for a new home. They found a ground hog's den that was too cold and damp. A hollow log was inhabited by a skunk. Finally, a hole in a tree was just right and the family moved just as the boy came back to disturb them.

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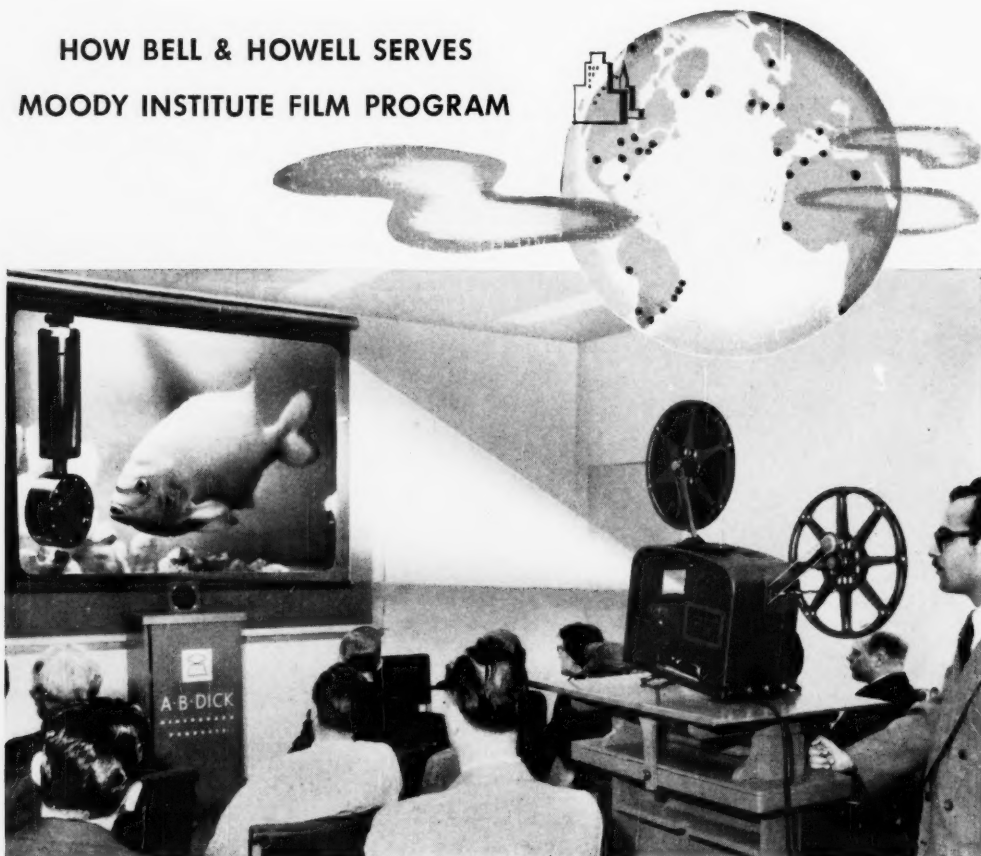
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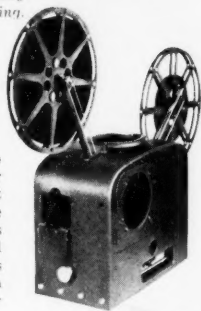
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